REMARKS

In response to the Office Action dated January 18, 2006, Applicants respectfully request reconsideration.

Examiner Interview

Applicants thank the Examiner for the personal interview conducted March 16, 2006. During that interview, discussion was had regarding possible amendments to claim 50 to recite "a first plurality of detectors on the gantry positioned substantially at a same first distance from the x-ray source" and "a second plurality of detectors on the gantry positioned substantially at a same second distance from the x-ray source, wherein the second distance is less than the first distance." Further, discussion was had regarding a possible amendment of the recitation of a first plurality of detectors in claim 50 to recite "a first set of detectors on the gantry all positioned substantially at a same first distance from the x-ray source," with a similar possible amendment regarding the second plurality of detectors recited in claim 50.

The Examiner interpreted such claim language in view of DiBianca and Dobbs, concluding that this claim language is not taught by either DiBianca or Dobbs. The Examiner interpreted a "set" to be all detectors on a detector board and interpreted "all positioned substantially a same distance" to mean that the detectors are exactly the same distance from the source within engineering tolerances, i.e., except for differences in the distance between the source and the detector due to the boards being flat (instead of circularly curved) and manufacturing tolerances such that the boards are not exactly flat/linear. The Examiner thus interpreted "a first set of detectors on the gantry all positioned substantially at a same first distance from the x-ray source," to require that a midpoint of the set of detectors is positioned on a circle centered at the x-ray source with a length of the detector set tangent to this circle. Applicants believe it was not specified by the Examiner where the midpoint is with respect to a depth of the set of detectors (i.e., on a face of the set, on a back of the set, or inside the set). The Examiner noted that neither FIG. 9 of DiBianca nor FIG. 9 of Dobbs shows such a recited arrangement. In particular, the Examiner noted that FIG. 9 of Dobbs shows sets of detectors disposed on circles centered at locations other than the focal spot.

Claim Objections

Claims 56, 58, 64, 73, 75 stand objected to because of informalities. Applicants have amended claim 58 as suggested by the Examiner, and have canceled claims 56, 64, 73, and 75 without prejudice, rendering the objections to these claims moot.

Claim Rejections - 35 USC § 102

Claims 74-75 stand rejected in view of 35 USC 102(b) in view of U.S. Patent No. 4,599,740 (Cable). These claims have been canceled without prejudice, rendering the rejection of these claims moot.

Claim Rejections - 35 USC § 103(a)

Claims 50-53 and 55-58 stand rejected under 35 USC 103(a) in view of U.S. Patent No. 6,335,957 B1 (DiBianca) and U.S. Patent No. 6,647,091 B2 (Fenkart). Claims 52, 53, and 55-57 have been canceled without prejudice, rendering the rejection of these claims moot. Claim 50 has been amended to recite a first plurality of detectors positioned a first distance from an x-ray source, a second plurality of detectors positioned a second distance, that is less than the first distance, from the x-ray source, and a third plurality of detectors positioned substantially the second distance from the x-ray source, where the x-ray beam intersects substantially an entire cross-section of a tunnel substantially transverse to a length of the tunnel, and the first, second, and third pluralities of detectors combined are configured and disposed to receive substantially all of the x-ray beam passing through the tunnel in the cross-section. Applicants respectfully submit that neither DiBianca nor Fenkart, alone or in combination, teach, disclose, or suggest at least these features of claim 50. For at least these reasons, claims 50, and 51 and 58, that depend from claim 50, are patentable over DiBianca and Fenkart.

Claim 54 stands rejected under 35 USC 103(a) over DiBianca in view of Fenkart in further view of U.S. Patent No. 6,658,082 B2 (Okumura). The Examiner does not assert that Okumura makes up for the deficiencies of DiBianca and Fenkart and thus claim 54 is patentable for at least the reasons discussed above.

Claims 59-60 stand rejected under 35 USC 103(a) over DiBianca in view of Fenkart in further view of U.S. Patent No. 4,796,183 (Ermert). These claims have been canceled without prejudice, rendering the rejection of these claims moot.

Claims 61-64 stand rejected under 35 USC 103(a) over DiBianca in view of Fenkart in further view of U.S. Patent No. 4,029,963 (Alvarez). Claims 63-64 have been canceled without prejudice, rendering the rejection of these claims moot. Claim 61 has been amended to recite a CT scanner comprising an x-ray source configured to provide an x-ray beam that includes at least two energy levels, a gantry rotatable around a tunnel and having first and second halves transverse to a length of the tunnel, a first plurality of detectors and a second plurality of detectors. The first plurality of detectors is responsive to a first energy level and is disposed on a first half of the gantry and the second plurality of detectors is responsive to a second energy level and is disposed on a second half of the gantry. The first plurality of detectors comprises a first portion disposed a first distance from the x-ray source and a second portion disposed a second distance from the x-ray source, and the second plurality of detectors comprises a first portion disposed substantially the first distance from the x-ray source and a second portion disposed substantially the second distance from the x-ray source. The x-ray beam intersects substantially an entire cross-section of the tunnel substantially transverse to the tunnel and the first and second pluralities of detectors combined are configured and disposed to receive substantially all of the x-ray beam passing through the tunnel in the cross-section. Applicants respectfully assert that none of DiBianca, Fenkart, and Alvarez, alone or in combination, teach, disclose, or suggest at least these features. Thus, claims 61 and 62, that depends from claim 61, are patentable over DiBianca, Fenkart, and Alvarez.

Claims 65-73 stand rejected under 35 USC 103(a) over Cable in view of Fenkart. These claims have been canceled without prejudice, rendering the rejection of these claims moot.

New Claims

Applicants have added claims 76-82. Applicants respectfully assert that these claims are patentable, and that these claims do not add new matter.

Conclusion

Based on the foregoing, this application is believed to be in allowable condition, and a notice to that effect is respectfully requested. The Examiner is invited to call Applicants' Attorney at the number provided below with any questions.

Respectfully submitted,

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